Chapter 9: Part 2
Preliminary Cost Estimate of Site Specific Projects and Programmatic Actions

Introduction

The purpose of the preliminary cost estimate is to provide "ballpark" costs, not actual costs, of the WRIA 8 action start-list. The WRIA 8 action start-list consists of high priority site specific projects and programmatic actions selected from the comprehensive lists of projects and actions. During 2003 and 2004, the comprehensive lists were developed through extensive participation of local stakeholders, jurisdictional staff, environmental and business representatives, project experts, and the WRIA 8 Technical Committee. These comprehensive lists were developed without attaching costs, as their objective was to identify projects and actions that have the highest benefit to Chinook salmon. The action start-lists were then selected by the Service Provider Team by applying the Steering Committee's approved criteria to the comprehensive lists. Upon completion of the action start-list an effort was undertaken to estimate costs for the projects and actions. These estimated costs give planning numbers to be used by decision makers within the context of overall funding plans.

This is a preliminary costing exercise. At this stage of the process, estimated costs are based on concepts, as well as specific projects. The concepts will be fleshed out over time as public and local government comments are incorporated into the plan and the results of the Treatment phase of the Ecosystem Diagnosis and Treatment model further refine priorities. Then cost estimates will need to be further refined as well to provide more accurate information. The cost estimates are subject to further – potentially substantial – revision as additional information regarding project scope, design and other factors becomes available.

Costs will also change over the timeframe of the start-list, which varies from projects that are ready to be implemented to undefined projects that may or may not be undertaken in the future. Programmatic actions are also variable; for example, some actions may need high levels of effort in the near term or others may need lower levels of effort sustained over a longer term.

Chapter 7 considers funding options to implement the first ten years of the planning horizon. This cost estimate is a component of that plan but is not a consistent annual cost over a ten-year period. Rather, site specific project costing gives an estimate for the action start-list projects that may change as other projects are identified as higher priority, or if projects are removed from, or modified on, the list due to feasibility constraints. Another variable that affects the implementation of the projects is when the funds are available, which also may vary significantly depending on the nature of the projects moving forward in any given year. The second component of this preliminary cost estimate is for programmatic action costs. It is important to note that the full-time equivalent (FTEs) staffing could be an additional level of effort, and thus cost, to that identified under shared staff (Chapter 2) and local jurisdictional efforts. This will depend on potential efficiencies that might be derived through collaborative implementation and whether local governments are already staffing identified or similar actions.

Overview of Methodology

The action start-list contains 166 actions, with many having several components. The first step was to group and code these actions so that costs could be viewed by various categories and types. Two main categories were formed - site specific projects and programmatic actions. Site specific projects are those actions that will occur on an identified location in the watershed. The two types of site specific projects

are protection and restoration. Programmatic actions include three types: land use actions, public outreach, and studies. These actions generally occur over a broader area of the watershed. The actions were also coded for where they occurred within the watershed into three groups: basin wide, within the Urban Growth Area (UGA) and outside the UGA. Research or studies associated with the proposed monitoring program were not included here (See Chapter 6).

Sources of Information

Information on costs for the site specific projects was gathered from a variety of sources. For some projects there were detailed estimates available from project managers who had developed costs as part of a pre-design costing estimate or as a grant funding request. Another source for detailed information was the Army Corps of Engineers' Lake Washington/Ship Canal General Investigation Study. If detailed project cost estimates were not available, then *A Primer on Habitat Project Costs (Primer*, Evergreen 2003) was used as follows to estimate types of projects that have similar components or characteristics. First, components were selected from the *Primer* to define an Acquisition, Riverine or Streambank restoration group (see Appendix D.2 for descriptions). Second, the projects were given a cost estimate based on the appropriate group's cost range. For projects that have a partial or older cost estimate from programs such as Waterways 2000 or the Cedar River Legacy, the method included refinement either through project managers or by comparing with a cost estimate using the *Primer*. One excellent example of comparable estimates was *Costing of the Hood Canal Coordinating Council's Summer Chum Salmon Recovery Plan* (2004, Evergreen) that used the *Primer* to group and cost projects. Finally, costs were brought up to 2004 costs by using a three percent per year inflation rate.

Sources of cost information on programmatic actions came primarily from the Service Provider Team for the land use actions and the public outreach actions. Estimates were developed by using similar programs or actions and then determining the amount of effort the action would need. Then this level of effort was evaluated by the Service Provider Team to estimate if it was already included in work being done by local jurisdictions or whether it constituted an additional level of effort. If it was an additional level of work, it was assigned a value for full time equivalent (FTE) staff time. Due to limited time the Service Provider Team did not consult with stakeholder jurisdictions on whether they have these programs, and if so the staffing level. Collaboration at a later date may identify efficiencies for implementing these actions. *A Primer on Habitat Project Costs (Primer*, Evergreen 2003) included an addendum, *Estimated Non-capital Costs of Watershed Salmon Recovery Plans* that gave a general FTE cost value ($100,000/FTE) that was used throughout this preliminary cost estimate for staff costs. If materials would be needed, these costs were estimated as well. For example, one public outreach proposal recommends producing and distributing copies of a video on habitat for Chinook for shoreline property owners. This is a new action and was included in material cost estimates.

Reliability of Information

The mix of high and low reliability in the cost estimates in this lumped-sum preliminary estimate gives an overall average that should be noted as a rough estimate. This is acceptable for planning cost estimates and future refinement of the actions and their estimates will strengthen their reliability. For site specific projects, pre-design estimates and known acquisition costs increased the overall reliability. Projects that are still conceptual, with undefined scopes or stream miles or acreage unknown had the opposite effect and decreased the reliability.

The reliability of information for programmatic actions results in a very rough cost estimate at this time. Costs were kept generic to capture all jurisdictions because limited consultation occurred with local jurisdictions to tailor costs. There was also limited research on actual program costs to use as comparables with the estimates. Most of the programmatic actions had the scope defined at only a preliminary level. In addition, the FTE staff estimates associated with start-list programmatic action implementation did not at this time adjust costs for efficiencies that might later be realized through jurisdictional collaboration or jurisdictional staff already implementing identified or similar actions. Additional discussion with stakeholders is needed to identify other, potentially more efficient, methods to implement these programmatic actions. The total programmatic FTE counts may be covered in part in the future by identifying existing levels of effort not accounted for, or a change in work programs to accomplish this work.

Overall Summary of Costs

This overall summary cost estimate (see Table 9-1) used the September 2004 action start-list Tier I site specific projects and programmatic actions. Individual cost estimates were developed for the three Chinook populations: Cedar River, North Lake Washington Tributaries, Issaquah and Migratory Areas (see Appendix D-2). Migratory areas include Lake Washington, Lake Sammamish, the Ship Canal, Locks, and Estuary and Nearshore Areas.

The total cost estimate for the three Chinook populations included 92 site specific projects that range in overall cost of $143 million to $170 million with an average project cost of $1.5 million to $1.8 million. Programmatic actions included 103 public outreach and land use actions that have an average annual cost range of $785,000 to $2.1 million. This annual estimate was multiplied by ten to reflect the overall planning goal. The total cost range is $9.9 million to $23.7 million, which includes North Lake Washington and Cedar River studies that cost approximately $1.6 million. The range for staffing for the three Chinook populations is 7.8 to 21 full-time equivalent (FTE) staff. These programmatic staff estimates are an additional level of effort to the shared staff identified in Chapter 2 and to the current level of effort by local jurisdictions. However, it must be noted as stated earlier that the programmatic staff estimates represent only one method of implementing these types of actions.

Cost estimates were also “rolled-up” for the three Chinook populations by where the start-list actions occurred, such as basinwide, within the Urban Growth Area (UGA), or outside of the UGA. The site specific projects were distributed with 28 projects within the UGA and 50 outside of the UGA. The majority of programmatic actions, 54 of the 103 total actions, were basinwide, with 5 actions within the UGA and 7 actions outside the UGA. Migratory Area actions account for 29 actions, while the Tier II subareas have 5 actions.

The preliminary cost estimate sub-divided the 166 start-list actions into 217 actions for the cost estimate purposes only. The cost estimate includes 195 of these 217 actions. For eleven site specific actions, the projects have not been scoped to the point where enough details are available, or details were not readily available, to develop accurate cost estimates. In addition, eleven programmatic actions did not have an associated cost if the staff level was accounted for in another action, or was included in existing efforts by local jurisdictions. Thus, these 22 actions were not included in the cost calculations.

Next Steps

While the Steering Committee has reviewed the methodology for cost development, and individual stakeholders provided information on project actions, individual costs for start-list actions have not been reviewed and approved by working committees or the Steering Committee. If actions on the start-list are modified through upcoming public and Forum review processes, costs could be revised and then submitted for additional review. However, due to the conceptual stage of the site-specific actions and the uncertainty about how programmatic actions would be implemented, the cost estimates for both site-specific and programmatic actions cannot be improved until the start-list is approved by the Forum and other decisions about plan implementation become finalized.